

**Sol Price School of Public Policy
University of Southern California**

PPD 361: Sustainable Communities, Policy and Planning

Fall 2021
Monday-Wednesday, 12-1:30PM

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Location:

Objectives and Requirements

This course provides an introductory survey of the public policy and planning strategies that are underway at the local and global levels with the goal of placing communities on a more sustainable path. The course is interdisciplinary in nature and relies on ideas and techniques from economics and public policy, planning, business and real estate, environmental studies, industrial ecology, and statistics.

The course has four parts: In the first part, we will present and discuss the theoretical foundations needed to define a sustainable community; We will then use this framework throughout the course. Part II surveys recent literature that examines public policy, planning, and business strategies to address the challenges of: i) tackling air pollution in cities (stationary and mobile sources); ii) alleviating traffic congestion in cities; iii) emerging new technologies, such as autonomous vehicles; iv) increasing residential energy use and conservation; v) growing mega cities in the developing world, including urban poverty and slums; vi) urban poverty and environmental justice. Part III surveys recent literature on various topics of climate change in cities, highlighting strategies for climate mitigation and adaptation. Finally, part IV discusses the use of big data in the so-called ‘smart-cities’.

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in GFS 120 and is open 8:30 a.m. – 4:30 p.m., Monday through Friday. The phone number for DSP is (213)740-0776.

Students are expected to adhere to the University Student Conduct Code as outlined by *SCampus*. The syllabus appendix summarizes these rules.

Grades

Students are expected to complete all assignments on time. Instructions on how to submit assignments will be posted on blackboard. The score on these assignments will drop 10% per day late.

Your grade will be determined based on:

- Weekly discussion board posts and responses (in small groups) (20%)
- 5 Problem Sets (in small groups) (20%)
- Midterm Exam (30%)
- Final Exam (30%)

Every week, you will watch a Ted-Talk on a topic related to the material covered in class. In groups of 4 people (assigned by the TA), you will then produce one reflection paragraph that addresses two questions: What was the most interesting idea of the video, and why? What was missing, and what additional important idea would you like to add? Your paragraphs will be posted in a discussion board, and you will have a chance to read the posts of the other groups, and respond to at least one. These materials will also become study materials for the midterm and final exam. Both the midterm and final exam will be close-book exams

Course Schedule and Topics

Weeks 1-2 (August 23-Sept 1) – Sustainable Cities: Definition and Theoretical Foundations

- The economic foundations of cities;
- The classical monocentric city model;
- Costs and benefits of agglomeration in cities;
- Unsustainable Cities and Urban Sprawl: Causes and Remedies, including planning and market-based strategies

Readings:

OECD. 2018. Rethinking Urban Sprawl

<https://www.oecd.org/environment/tools-evaluation/Policy-Highlights-Rethinking-Urban-Sprawl.pdf>

Brody, Samuel. 2013. “The Characteristics, Causes, and Consequences of Sprawling Development Patterns in the United States”

<https://www.nature.com/scitable/knowledge/library/the-characteristics-causes-and-consequences-of-sprawling-103014747/>

Brueckner, Jan. 2000. “Urban Sprawl: Diagnosis and Remedies”

<https://doi.org/10.1177/016001700761012710>

CityLab short articles:

1. A Ranking of the Most Sprawling U.S. Metro Areas, and Why You Should Care
<https://www.citylab.com/life/2014/04/ranking-most-sprawling-us-metro-areas-and-why-you-should-care/8782/>
2. Have We Reached Peak Sprawl?
<https://www.citylab.com/equity/2013/10/have-we-reached-peak-sprawl/7102/>

Ted Talk for discussion board 1:

Can we rebuild our broken suburbs?

https://www.ted.com/talks/ellen_dunham_jones_retrofitting_suburbia

Week 3-4 (Sept 8, 13-15) – Los Angeles Green Deal

Discussion Board Post 1 is due (Sept 8)

Problem Set 1 is due (September 13)

- Why a green deal?
- The key elements of the green deal
- Financing the green deal

Readings:

https://plan.lamayor.org/sites/default/files/pLAn_2019_final.pdf

Los Angeles' Green new deal (case studies and best practice examples)

https://www.c40knowledgehub.org/s/article/Los-Angeles-Green-New-Deal?language=en_US

Citylab short articles:

<https://www.citylab.com/equity/2017/08/measuring-americas-most-and-least-sustainable-cities/536502/>

<https://www.citylab.com/design/2013/05/chinas-eco-cities-substantive-and-skimpy-same-time/5748/>

Ted Talks for discussion board 2:

How city mayors are taking action on climate change

https://www.ted.com/talks/eric_garcetti_how_city_mayors_are_taking_action_on_climate_change

Europe's plan to become the first carbon-neutral continent

https://www.ted.com/talks/ursula_von_der_leyen_europe_s_plan_to_become_the_first_carbon_neutral_continent

Week 5 (Sept. 20-22) – Air Pollution in Cities and Mobile Sources
Group Discussion Board 2 is due (September 20)

- Basic Trends in Air Pollution in the United States;
- The Clean Air Act: Structure, Enforcement, and Delegation;
- Association of air pollution and mortality;
- Estimating the costs and benefits of air pollution reductions from stationary sources
- Air Pollution in Mega Cities of the Developing World;

Readings:

Chan, Chak and Xiaohong Yao. 2008. “Air Pollution in mega cities in China”. Atmospheric Environment

<https://www.sciencedirect.com/science/article/pii/S1352231007007911>

Samet, Jonathan et al. 2000. “Fine Particulate Air Pollution and Mortality in 20 US cities, 1987-1994”. The New England Journal of Medicine.

<https://www.nejm.org/doi/full/10.1056/nejm200012143432401>

Citylab short articles:

<https://www.citylab.com/environment/2014/05/us-faces-longer-summer-worsening-ozone-pollution/9041/>

<https://www.citylab.com/environment/2015/08/mapping-global-air-pollution-down-to-the-neighborhood-level/400337/>

<https://www.citylab.com/transportation/2012/12/people-trying-to-avoid-air-pollution-might-be-getting-even-more-pollution/4249/>

<https://www.citylab.com/environment/2018/05/mexico-city-looks-for-new-ways-to-tame-air-pollution/558698/>

<https://www.citylab.com/design/2014/04/people-of-color-are-disproportionately-killed-by-air-pollution/8881/>

<https://www.citylab.com/environment/2018/01/seoul-takes-on-air-pollution-with-free-public-transit/550829/>

<https://www.citylab.com/environment/2015/06/where-electric-vehicles-actually-cause-more-pollution-than-gas-cars/397136/>

<https://www.citylab.com/transportation/2018/07/how-trump-is-targeting-california-car-pollution-standards/566300/>

<https://www.citylab.com/equity/2016/01/delhi-india-car-ban-smog-pollution-traffic/431526/>

<https://www.citylab.com/environment/2018/03/brussels-pollution-emergency-plan-transit-energy/554363/>

<https://www.citylab.com/transportation/2017/03/barcelona-will-ban-older-cars/518805/>

<https://www.citylab.com/transportation/2018/01/to-measure-the-uber-effect-cities-get-creative/550295/>

<https://www.citylab.com/transportation/2014/07/how-parking-spaces-are-eating-our-cities-alive/374413/>

Ted Talks for discussion board 3

How China is (and isn't) fighting pollution and climate change?

https://www.ted.com/talks/angel_hsu_how_china_is_and_isn_t_fighting_pollution_and_climate_change

What is in the air you breathe?

https://www.ted.com/talks/amy_hrdina_and_jesse_kroll_what_s_in_the_air_you_breathe

Week 6 (September 27-29) – Addressing Congestion in Cities

Problem Set 2 due (September 27)

Group Discussion Board 3 is due (September 29)

- Basic Facts and Policies;
- Congestion Pricing
- High Occupancy Vehicle Lanes and ExpressLanes;
- Benefits of Public Transit
- Road Infrastructure

Readings:

<https://www.citylab.com/transportation/2018/01/could-congestion-pricing-finally-work-for-new-york-city/550958/>

<https://www.citylab.com/transportation/2018/07/dont-blame-ride-hailing-for-traffic-congestion/566222/>

<https://www.citylab.com/transportation/2018/04/londons-congestion-charge-needs-updating/557699/>

<https://www.citylab.com/transportation/2014/03/putting-price-dcs-worst-commute/8653/>

<https://www.citylab.com/transportation/2013/10/how-traffic-congestion-impacts-economic-growth/7310/>

<https://www.citylab.com/transportation/2018/05/could-congestion-charges-work-in-latin-america/560858/>

Ted Talk for discussion board 4:

The Future we're building and boring

https://www.ted.com/talks/elon_musk_the_future_we_re_building_and_boring

Week 7 (Oct. 4 – 6) – Autonomous Vehicles and smart technologies

Group Discussion Board 4 is due (Oct 4)

Problem Set 3 due (Oct 6)

Readings:

<https://www.citylab.com/transportation/2017/05/even-shared-autonomous-vehicles-could-spell-traffic-disaster/525951/>

<https://www.citylab.com/life/2017/01/the-future-of-autonomous-vehicles-is-shared/512417/>

<https://www.citylab.com/life/2017/05/how-not-to-prepare-for-the-self-driving-revolution/526671/>

<https://www.citylab.com/transportation/2014/01/what-will-happen-public-transit-world-full-autonomous-cars/8131/>

Ted Talks for discussion board 5:

What a driverless world could look like

https://www.ted.com/talks/wanis_kabbaj_what_a_driverless_world_could_look_like

If cars could talk, accidents might be avoidable

https://www.ted.com/talks/jennifer_healey_if_cars_could_talk_accidents_might_be_avoidable

Week 8 (Oct 11-13) – Review and Midterm
Group Discussion Board 5 is due (Oct 11)

Week 9 (Oct 18-20) - Residential Energy Use and Conservation in Cities

- Physical and Technical Determinants of energy consumption;
- economic behavior of resident households;
- Green Building
- Nudges;
- Real Time Pricing

Readings:

<https://www.citylab.com/environment/2018/07/sweden-will-meet-its-2030-green-energy-target-12-years-early/565709/>

<https://www.citylab.com/equity/2015/11/americas-increasingly-gigantic-homes-are-making-us-less-energy-efficient/416139/>

<https://www.citylab.com/environment/2011/10/reducing-water-energy-use-through-peer-pressure/384/>

<https://www.citylab.com/equity/2012/12/why-renters-waste-more-energy-homeowners/4250/>

Ted Talks for discussion board 6:

Tradeoffs of building green

https://www.ted.com/talks/catherine_mohr_the_tradeoffs_of_building_green

The thrilling potential for off grid solar energy

https://www.ted.com/talks/amar_inamdar_the_thrilling_potential_for_off_grid_solar_energy

Week 10 (Oct 25-27) – Megacities and the Developing World Urban Poverty: Informal Settlements and Slums.

Group Discussion Board 6 is due (Oct 25)

- Causes of Slum formation
- Consequences of Slum
- Policies to improve the welfare of Slum dwellers

Readings:

<https://www.citylab.com/life/2014/01/why-so-many-mega-cities-remain-so-poor/8083/>
<https://www.citylab.com/life/2015/06/the-problem-of-urbanization-without-economic-growth/395648/>
<https://www.citylab.com/equity/2014/02/developing-worlds-urban-population-could-triple-2210/8431/>
<https://www.citylab.com/equity/2017/12/bigger-isnt-necessarily-better-when-it-comes-to-city-size/548276/>
<https://www.citylab.com/design/2013/02/why-india-likes-its-cities-so-short/4699/>
<https://www.citylab.com/life/2014/01/amazing-endurance-slums/8120/>
<https://www.citylab.com/equity/2017/10/should-we-retire-the-word-slum/542415/>
<https://www.citylab.com/solutions/2017/06/a-case-for-improving-not-relocating-indias-urban-slums/529710/>
<https://www.citylab.com/equity/2018/02/letting-slum-residents-control-their-own-destiny/554120/>
<https://www.citylab.com/life/2017/05/the-transformative-power-of-play-in-indias-slums/525228/>

Ted Talks for discussion board 7:

What if poor were part of the city planning?

https://www.ted.com/talks/smruti_jukur_johari_what_if_the_poor_were_part_of_city_planning

Teaching on Children at a time

https://www.ted.com/talks/shukla_bose_teaching_one_child_at_a_time

Week 11 (Nov 1 - 3) – Urban Poverty and Inequality

Group Discussion Board 7 (due Nov 1)

Problem Set 4 (due Nov 3)

Readings to be posted soon

Ted Talks for discussion board 8:

Greening the Ghetto

https://www.ted.com/talks/majora_carter_greening_the_ghetto

Week 12 (Nov 8 - 10) - Cities and Climate Change: Resilience
Group Discussion Board 8 is due (Nov 8)

- Cities, Disasters, and Climate risk
- Urban Climate: processes, trends, and projections
- Adaptation

Readings:

<https://www.citylab.com/design/2016/07/when-climate-adaptation-hurts-the-urban-poor/492263/>
<https://www.citylab.com/life/2012/06/cities-might-not-exist-without-air-conditioning/2399/>
<https://www.citylab.com/life/2018/04/what-mayors-want/557312/>
<https://www.citylab.com/environment/2016/10/sea-level-rise-is-affecting-miami-low-income-communities/505109/>

Ted Talks for discussion board 9:

The Economic Benefits of Climate Action

https://www.ted.com/talks/marcelo_mena_the_economic_benefits_of_climate_action

Climate change will displace millions. Here's how we prepare

https://www.ted.com/talks/colette_pichon_battle_climate_change_will_displace_millions_here_s_how_we_prepare

Week 13 (Nov 15-17) – Cities and Climate Change: heat waves, fires, and droughts
Problem Set 5 (due Nov 17)

Group Discussion Board 9 is due (Nov 15)

- Climate Change and urban energy systems
- Heat waves

Readings:

<https://www.citylab.com/environment/2018/07/the-european-heat-wave-is-brutal/565955/>
<https://www.citylab.com/equity/2013/05/inequality-urban-tree-cover/5604/>

Ted talks for discussion board 9:

What open water swimming taught me about resilience

https://www.ted.com/talks/bhakti_sharma_what_open_water_swimming_taught_me_about_resilience

Why wildfires have gotten worse – and what we can do about it

https://www.ted.com/talks/paul_hessburg_why_wildfires_have_gotten_worse_and_what_we_can_do_about_it

Week 14 (Nov 22-24) – Big Data and Cities

Group Discussion Board 9 is due (Nov 22)

Readings: To be posted

Ted talk for discussion board 10:

Architecture that senses and responds

https://www.ted.com/talks/carlo_ratti_architecture_that_senses_and_responds

Week 15 (Nov 29 – Dec 1) – Final thoughts and Review for Final

Group Discussion Board 10 is due (Nov 9)

University Exam Period

Final Exam - The date and time for the final exam are dictated by the University, see

<https://classes.usc.edu/term-20213/>

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Student Health Counseling Services - (213) 740-7711 – 24/7 on call

engemannshc.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call

suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 – 24/7 on call

engemannshc.usc.edu/rsvp

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) | Title IX - (213) 740-5086

equity.usc.edu, titleix.usc.edu

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected

characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

Bias Assessment Response and Support - (213) 740-2421

studentaffairs.usc.edu/bias-assessment-response-support

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

The Office of Disability Services and Programs - (213) 740-0776

dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710

studentaffairs.usc.edu/ssa

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.

APPENDIX

ACADEMIC RESPONSIBILITY

Students, faculty, and administrative officials at the University of Southern California, as members of the academic community fulfill a purpose and a responsibility.

The University must, therefore, provide an optimal learning environment, and all members of the University community have a responsibility to provide and maintain an atmosphere of free inquiry and expression. The relationship of the individual to this community involves these principles: Each member has an obligation to respect:

1. THE FUNDAMENTAL HUMAN RIGHTS OF OTHERS
2. THE RIGHTS OF OTHERS BASED UPON THE NATURE OF THE EDUCATIONAL PROCESS
3. THE RIGHTS OF THE INSTITUTION

ACADEMIC DISHONESTY

The following statements and examples explain specific acts of academic dishonesty.

1. Examination Behavior: Any use of external assistance during an exam is considered academically dishonest unless expressly permitted.
 - a. Communicating in any way with another student during the examination.
 - b. Copying material from another student's exam.
 - c. Using unauthorized notes, calculators or other devices.
2. Fabrication: Any intentional falsification or invention of data or citation in an academic exercise will be considered a violation of academic integrity.

- a. Inventing or altering data for a laboratory experiment or field project.
 - b. Resubmitting returned and corrected academic work under the pretense of grader evaluation error, when, in fact, the work has been altered from its original state.
3. Plagiarism: Plagiarism is the theft and subsequent passing off of another's ideas or words as one's own. If the words or ideas of another are used, acknowledgement of the original source must be made through recognized referencing practice.
- a. Direct Quotation: Any use of a direct quotation should be acknowledged by footnote citation and by either quotation marks or appropriate indentation and spacing.
 - b. Paraphrase: If another's ideas are borrowed in whole or in part and are merely recast in the student's own words, proper acknowledgement must, nonetheless, be made. A footnote or proper internal citation must follow the paraphrase material.
4. Other Types of Academic Dishonesty:
- a. Submitting a paper written by another;
 - b. Using a paper or essay in more than one class without the instructor's express permission;
 - c. Obtaining an advance exam copy without the knowledge or consent of the instructor;
 - d. Changing academic records outside of normal procedures;
 - d. Using another person to complete homework assignment or take-home exam without the knowledge and consent of the instructor.

The above information is taken directly from *SCampus* and the Academic Affairs Unit of the Student Senate in conjunction with the Academic Standards Committee.

**ACADEMIC DISHONESTY
SANCTION GUIDELINES**

VIOLATION	RECOMMENDED SANCTION (assuming first offense)
Copying answers from other students on exam.	F for course.
One person allowing another to cheat from his/her exam or assignment.	F for course for both persons.
Possessing or using extra material during exam (crib sheets, notes, books, etc.)	F for course.
Continuing to write after exam has ended.	F or zero on exam.
Taking exam from room and later claiming that the instructor lost it.	F for course and recommendation for further disciplinary action (possible suspension).
Changing answers after exam has been returned.	F for course and recommendation for disciplinary action (possible suspension).
Fraudulent possession of exam prior to administration.	F for course and recommendation for suspension.

Obtaining a copy of an exam or answer key prior to administration.	Suspension or expulsion from the university; F for course.
Having someone else take an exam for oneself.	Suspension or expulsion from the University for both students; F for course.
Plagiarism.	F for the course.
Submission of purchased term papers or papers done by others.	F for the course and recommendation for further disciplinary action. (possible suspension)
Submission of the same term papers to more than one instructor where no previous approval has been given.	F for both courses.
Unauthorized collaboration on an assignment.	F for the course for both students.
Falsification of information in admission application (including supporting documentation).	Revocation of university admission without opportunity to apply.
Documentary falsification (e.g., petitions and supporting materials medical documentation).	Suspension or expulsion from the university; F for course when related to a specific course.
Plagiarism in a graduate thesis or dissertation.	Expulsion from the university when discovered prior to graduation; revocation of degree when discovered subsequent to graduation.

Please refer to *Trojan Integrity: A Faculty Desk Reference*, for more information on assessing sanctions. You may also consult with members of the Office of Student Judicial Affairs and Community Standards at any point in the process, (213) 740-6666

Note: The Student Conduct Code provides that graduate students who are found responsible for academic integrity violations may be sanctioned more severely than Appendix A suggests.